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**SUPPORTING STUDENTS WITH ASPERGER SYNDROME
IN HIGHER EDUCATION**

by
Julie A. Ciocco

A Thesis

Submitted to the
Department of Education
College of Graduate and Continuing Education
In partial fulfillment of the requirement
For the degree of
Master of Arts in Learning Disabilities
at
Rowan University
May 4, 2011

Thesis Chair: Dr. S. Jay Kuder

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Julie A. Ciocco

Dedication

I would like to dedicate this manuscript to my cousin's son, Jeremy.

Acknowledgements

I would like to express my appreciation to Dr. Jay Kuder for his guidance and help throughout this research, as well as to Mr. John Woodruff, Ms. Amanda Mason, and my husband for their assistance and patience.

Abstract

Julie A. Ciocco
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In this research project, the Peer Coaching Program for Students with Asperger Syndrome (or with demonstrated weaknesses similar to AS) at Rowan University in Glassboro, New Jersey was analyzed for effectiveness. The program's seventeen student participants and seven coaches were surveyed in order to attain data on the demographics of each group, their skills, their weaknesses, and their experiences within the program. It was found that most of the students were able to either maintain their GPAs or raise their GPAs while participating in the program, and all were exposed to various social skill training activities and workshops to help them with organization, time management, stress management, study skills, and other types of practical and functional skills. Results show that this program is effective in various ways with helping students with AS and other disabilities adjust to college life and learn skills that will also help them be successful in the future.

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Chapter 1

Introduction

Asperger Syndrome (AS) is becoming better known and widely identified. Therefore, many schools are beginning to adopt or develop programs to support students with this disability, even at the college level. College level students with AS get into schools on their own since they tend to have average to above average IQs, but do not possess certain skills that make adjustment to the independence of higher education an easy process. Much of the support these students require is in developing the social skills they need in order to behave appropriately in day to day situations, which is a major difficulty for people with AS. But what are the specific needs of a college-age student with AS? Who should be responsible for providing support to the college student with AS? How will the support or program be assessed? To what extent should parents and school faculty and staff be involved?

While considering these questions among others, this study examines the effectiveness of a support program for students with Asperger Syndrome at Rowan University. The peer coaching program has been in existence for several semesters. Students are encouraged to participate in individual meetings with their peer coach, a weekly support group, and a monthly workshop. The program allows each student to become more acclimated to the campus, and teaches each student study skills, time management, organization skills, and most importantly social skills. This and similar programs may be especially helpful for students with AS due to the unique challenges of the college setting (i.e. roommates, class schedules, freedom, work, diversity, etc.).

Research Question & Hypothesis:

Can a specialized support program for college students with Asperger's Syndrome improve student learning and socialization outcomes?

Effectiveness of the program will be gauged by surveying the students and coaches involved in the program, analyzing the completion of set program goals, and analyzing pre- and post-program academic records.

Key Terms:

Learning Disability - a neurological disorder in which a person has difficulty learning in a typical manner, usually caused by an unknown factor or factors. The unknown factor is the disorder that affects the brain's ability to receive and process information. This disorder can make it problematic for a person to learn as quickly or in the same way as someone who is not affected by a learning disability. Learning disability is not indicative of intelligence level. Rather, people with a learning disability have trouble performing specific types of skills or completing tasks if left to figure things out by themselves or if taught in conventional ways.

Asperger's Syndrome (AS) - is a disorder on the autism spectrum that is characterized by significant difficulties in social interaction, along with restricted and repetitive patterns of behavior and interests.

Autism Spectrum Disorders (ASD) - a spectrum of psychological conditions characterized by widespread abnormalities of social interactions and communication, as well as severely restricted interests and highly repetitive behavior.

Pervasive Developmental Disorders (PDD) - refers to a group of five disorders characterized by delays in the development of multiple basic functions including socialization and communication. The pervasive developmental disorders are Pervasive developmental disorder not otherwise specified (PDD-NOS), which includes atypical autism (or is also called atypical autism), and is the most common; Autism, the best-known; Asperger syndrome; Rett syndrome; and Childhood disintegrative disorder (CDD). The first three of these disorders are commonly called the autism spectrum disorders; the last two disorders are much rarer, and are sometimes placed in the autism spectrum and sometimes not.

High-Functioning Autism (HFA) - an informal term applied to autistic people who are deemed to be "higher functioning" than other autistic people, by one or more metrics. There is no consensus as to the definition.

Nonverbal Communication - communication through sending and receiving wordless messages (i.e. body language, facial expression, eye contact, etc.).

Empathy - the capacity to, through consciousness rather than physically, share the sadness or happiness of another sentient being.

Behavioral Therapy – (or behavior modification) is an approach to psychotherapy based on learning theory which aims to treat psychopathology through techniques designed to reinforce desired and eliminate undesired behaviors.

Nuance - a subtle difference or distinction in expression, meaning, response, etc.

Accommodations – adjustments made in a classroom that allow students to receive information or to demonstrate what they have learned in ways that work around their impairment, thereby minimizing the likelihood of a significant disability (i.e. preferential

seating, photocopies of teacher notes, giving oral rather than written quizzes, alternative or modified assignments, extended time for tests and assignments, use of a word processor or laptop, taking tests in a quiet room, etc.).

Self-efficacy - the belief that one is capable of performing in a certain manner to attain certain goals.

Self-advocacy - refers to the civil rights movement for people with developmental disabilities, also called cognitive or intellectual disabilities, and other disabilities. It is also an important term in the disability rights movement, referring to people with disabilities taking control of their own lives, including being in charge of their own care in the medical system. The self-advocacy movement is (in basic terms) about people with disabilities speaking up for themselves. It means that although a person with a disability may call upon the support of others, the individual is entitled to be in control of their own resources and how they are directed. It is about having the right to make life decisions without undue influence or control by others.

Possible Implications for teaching/learning/schools:

Due to the specific needs of students with AS, a program which supports social and emotional growth may be the key to a better college experience for these students. If a program is effective, it can produce many valuable benefits to both the school and the student body. For instance, in the case of a successful coaching program for students with Asperger's Syndrome, the product will be students with disabilities who are better equipped to function in the real world, as well as with a more knowledgeable and accepting general population. In other words, a successful program is a win-win

situation. Additionally, if students with AS can conquer some of their social skill issues, they can then focus more on their studies and succeed in class as well as out in the world.

Summary of problems/implications:

What challenges do college students with Asperger Syndrome face? What is the transition process like for students with AS? What supports are offered to them if any at the college level? Are the supports effective, that is, do students who take advantage of support programs enjoy school more, adjust more easily, and get better grades? How can support programs, like the one at Rowan, improve? Should support programs be extended into high schools and middle schools? These are questions that will be addressed in this study. The answers will tell us much about the quantity, effectiveness, and possible needed modifications to programs that colleges are using to support students with special needs, especially those with Asperger Syndrome.

Chapter 2

Literature Review

I. Asperger Syndrome – What is it?

Until recently, Asperger's Syndrome (AS), named after its founder Hans Asperger, was receiving little attention, and there are still very few articles that look at the impact this disability has on one's educational and social abilities, especially in higher grade levels and post-secondary schools (Safran, 2001). In 2001, Safran suggested that the lack of attention to AS could be due to the fact that the condition was not adopted by the Diagnostic and Statistical Manual IV of Mental Disorders (DSM-IV) until the mid-90s, and there may be a high number of children and adults that have yet to be identified due to the indistinct definition that plagued AS for decades. Also, AS is sometimes thought of as simply being a specific form of autism, and therefore not a separate disability with its own identity (Griffin, Griffin, Fitch, Albera, and Gingras; 2006). Furthermore, since many people with AS experience normal language development and possess an average intelligence while growing up, it is not until adulthood that they are diagnosed (Safran, 2001). However, since the diagnoses of Autism Spectrum Disorders (ASDs) has increased dramatically in recent years, with AS as one of the quickest growing divisions of this population, it is more important now than ever that we focus on helping these children and adults adjust to the society in which they live (Rao, Beidel, and Murray; 2008).

The definition used to identify Asperger Syndrome as per the DSM-IV explains that there are specific social impairments that must be present in order to differentiate this disorder from others like it, such as High Functioning Autism (Safran, 2001), which must

involve “some or all of the following: impaired use of nonverbal behaviors to regulate social interaction, failure to develop age-appropriate peer relationships, lack of spontaneous interest in sharing experiences with others, and lack of social or emotional reciprocity” (American Psychiatric Association, 1994, p. 75; Smith, 2007). Therefore, individuals with AS are typically unsuccessful at forming appropriate social relationships, but do not generally experience the other more severe impairments that accompany autism. Another indication to help diagnose AS is measured intelligence (IQ). People who are identified with AS will either have average or above average intelligence, will often be gifted in one way or another (Safran, 2001), and because of their intelligence, are often completely aware of their insufficiencies which could lead to many frustrating experiences (Rao et al., 2008). Additionally, the difficulties a person with AS may have will most likely continue into adulthood, negatively influencing their social and occupational performance (Rao et al., 2008). Statistics show that people with AS are much more likely to struggle with consistent and suitable employment, as well as with gratifying social relationships (Rao et al., 2008).

Identifying a student or adult with Asperger’s Syndrome might require observing the person in their daily life and noting how they behave socially, how they communicate with others and the world around them, and if they demonstrate repetitive behaviors that are out of the ordinary. Since AS is present throughout a person’s entire life, symptoms of the condition leading to identification may be recognized as early as age two, and as late as adulthood (Woodbury-Smith & Volkmar, 2009). Typically, a person with AS will not be able to relate to their peers as expected, and many might suspect autism at first glance (Woodbury-Smith, 2009). However, as stated earlier, a measure of cognitive

ability will typically separate the autistic person from the person with Asperger's Syndrome. Additionally, persons with AS will characteristically demonstrate a keen interest in a specific topic which may seem to occupy their every thought and conversation, while an autistic person may not express much interest in anything in their environment due to their more impaired communication skills (Woodbury-Smith, 2009). Nevertheless, it is important to keep in mind that there is a difference between the amount of communication an autistic person is capable of versus that of a person with AS. Although the person with AS might monopolize a conversation about their favorite topic, at least they are willing to actively participate in a verbal conversation (Woodbury-Smith, 2009).

Apart from having normal to high intelligence and normal language development with possible specific area(s) of interest, other common traits may also accompany a diagnosis of AS. For instance, an unusual and sometimes odd way of speaking may be present, such as speaking very formally or in a robotic type of voice (Woodbury-Smith, 2009). Also, repetitive or inappropriate behaviors; difficulty with creative writing, inferences, sarcasm, and hidden meanings; complications with transition and change; physical clumsiness; and sensitivity to light, sound, tastes, and textures may all be in attendance (Gibbons & Goins, 2008). The symptoms of AS may be compounded by a variety of other disorders as well, such as ADD, ADHD, and OCD (Gibbons, 2008). As you can probably imagine, this combination of traits will most likely have a negative impact on a person emotionally, behaviorally, academically, and socially. However, with proper support and training, a student or adult with AS can manage to overcome

many of these issues and become successful in whatever they wish to do, unlike an autistic person who may be trapped in their own world their entire life.

So if individuals with Asperger Syndrome possess acceptable functional skills in several areas and average to above-average IQs, why do they require assistance in order to be successful? Well, simply because studies have shown that social skills, which are very necessary for proper and everyday communication, do not naturally improve with age for people with AS (Saulnier & Klin, 2007), and yet this population has the cognitive abilities to accomplish great things. We would therefore be doing a great disservice to these individuals if we did not provide them with the social skills training and adaptive tools they need to succeed. Additionally, most students with AS can be found in general education classrooms (Safran, 2001) making knowledge of the condition and interventions that can benefit them, their parents, their classmates, and their teachers extremely advantageous.

II. Educational & Social Interventions for Students with Asperger Syndrome

Since individuals with Asperger Syndrome have difficulty comprehending multifaceted social interactions, their academic skills suffer and they tend to develop behavior issues due to this feeling of inadequacy (Griffin et al., 2006). Aside from social issues, people with AS also possess problems with problem-solving skills, organizational skills, and note-taking skills which often results in poor written expression and math scores (Griffin et al., 2006). However, as mentioned earlier, they have no problem expressing their thoughts and interests orally, and may possess extensive vocabularies, which is sometimes why their disability is not identified until later in life (Griffin et al.,

2006). There are many ways to help an individual with Asperger's Syndrome, however. Many useful interventions are easy to carry out and require no cost or special training. In many schools, interventions such as social skills training courses, social stories, and structured teaching may be utilized, but not all of these can be carried over into higher learning or adult situations, and not all have been proven to be effective for each individual (Safran, 2001). Behavior plans and modified schedules may also be effective for students with AS (Gibbons, 2008), but adults may have to develop a personal plan themselves to help them get through their days.

At this point it may be necessary to define social skills since they are the factors that set Asperger Syndrome apart from other disorders. Rao et al (2008) have defined social skills as "specific behaviors that result in positive social interactions and encompass both verbal and non-verbal behaviors necessary for effective interpersonal communication." Social skills connect us to others in a very personal way by involving language, emotions, and behavior. Social Skills Training (SST) and similar programming can therefore help improve an individual's life in many ways. This is especially important to individuals with AS since they, unlike those in the broader population of people with autism, are expected to interact appropriately in the general population (Rao et al., 2008). These types of programs focus on teaching the use of certain communication and problem-solving skills in specific social situations such as eye contact; being conscious of personal space; empathy; understanding and using nonverbal (body) language; the art of giving and receiving compliments; conversational skills; table manners; awareness and expression of feelings; politeness; listening; negotiation; and even hygiene (Griffin et.al. 2006). Very few social skills training programs are designed specifically for people with

AS, however, although they might have the greatest need for this type of instruction and practice (Rao et al., 2008).

Some academic accommodations that have been used for students with AS of all ages include texts with highlighted information, access to computers, lesson previews, and visual aids such as graphic organizers that use a tangible representation of abstract information and break writing assignments down into more manageable pieces (Griffin et al., 2006). Other interventions have included individualized instructions, extended time for completion of larger assignments, creating alternative exams and assignments, providing study guides, and providing modified written assignments (Griffin et al., 2006). Additionally, since persons with AS also tend to monopolize conversations about their favorite topics (as discussed earlier), parents, teachers, and employers may want to set a limit on the amount of time that can be spent discussing a specific topic, and use that interest to expand the student's awareness of related topics (Griffin et al., 2006). Furthermore, since poor organizational skills are a major deficit for persons with AS, interventions such as utilizing color-coded systems to organize files and other information may prove to be very helpful (Griffin et al., 2006). And of course, any amount of social skills training is especially beneficial to a person with AS (Gibbons, 2008) since developing these skills may lead to more positive interactions with and acceptance from one's peers, improved academic skills, and overall mental wellbeing (Rao et al., 2008).

Whichever accommodations an individual with AS receives, it is important that the intervention is provided on a consistent basis, and preferably reinforced by several people close to the individual (parents, teachers, employers, peers, therapists, etc.) (Griffin et al.,

2006). For an intervention program to be most effective for a person with AS it should also be very structured, feature the systematic training of social and language skills, involve a mentor of some kind, and provide academic accommodations (Griffin et al., 2006). Interventions that involve mentors may include trusted adults, older students, or any other person that can serve as a model to prompt the individual with AS when a specific social skill needs to be put into practice (Griffin et.al. 2006). Many schools and universities have also begun to employ the peers of students with AS to help guide them through social situations, help budget their time, and provide models of acceptable behaviors (Gibbons, 2008).

III. Transition & Adjustment

In the state of New Jersey, transition planning for a student with a disability typically begins at age fourteen (Janiga & Costenbader, 2002). At this point, the student has most likely just begun high school, and has most likely not put in too much thought about their future. In any case, it is important to begin asking the student questions about what they want to do after high school. What are their interests and goals in life? Are they planning to continue their education, and if so, are they capable of attending college? Do they have a career in mind? These questions, among many others, need to be answered in order to plan appropriately for the student, and that's where the transition planning team comes into the picture. This team can consist of a special education teacher, general education teacher, guidance counselor, psychologist, LDT-C, parents, a postsecondary LD service provider, and others, but must always include the student at its core (Brinckerhoff, 1996). The transition team's main goal should be to help the student evaluate their strengths, weaknesses, interests, and values so they can better navigate

their way through the complicated and challenging process of planning their future (Janiga & Costenbader, 2002).

If the student declares that he or she is interested in continuing their education, it must first be determined if they are *able* to attend a postsecondary educational or vocational institution, and if so, which one best suits their needs and interests (Janiga & Costenbader, 2002). If it is decided that the student can be successful in a postsecondary educational or vocational program, the next step is to plan for such success by making sure the student takes the classes they will need, knows what services they will require and how to go about receiving them, and acquires the skills that will enable them to advocate for themselves and achieve success as independent individuals (Janiga & Costenbader, 2002). Being able to self-advocate is especially important since the definition of what constitutes a “learning disability” changes once a student is out of high school, which therefore changes the availability of services (Janiga & Costenbader, 2002). This will require the student to know the ins and outs of their disability, what services they are legally entitled to, and how to go about explaining their disability and needs to those in their new environment (Janiga & Costenbader, 2002). Besides self-advocacy skills, the transition team may also want to include some type of career counseling, social skills training, and explain the major differences between high school and postsecondary schools or programs in order to aid in adjustment (Janiga & Costenbader, 2002).

Some of the major differences between secondary and postsecondary schools include larger class sizes, longer instructional time periods, less student-teacher contact, the assignment of long-range projects, infrequent evaluations, more unstructured time to

manage, the loss of certain support systems, and different teaching, examination, and grading methods at the postsecondary level (Janiga & Costenbader, 2002). Also, skills such as good note taking, learning and studying strategies, integrating information, and paraphrasing become more important at the postsecondary level since much of the work done is completed independently, and there is more focus on mastery of material as opposed to memorization and personal improvement (Brinckerhoff, 1996). Additionally, navigating a college campus as opposed to the halls of a high school may prove to be the greatest challenge for some students with disabilities due to the size and sources of distraction present at many institutions (Brinckerhoff, 1996). And finally, if and when a student does get accepted into a postsecondary educational or vocational program, they may need additional support keeping up with the competition in order to graduate (Brinckerhoff, 1996).

Although college and other postsecondary institutions are very different from high school, some of the supports a student with a learning disability may require are still present and offered to them if they qualify at the postsecondary level. For instance, alternative test formats, extended time on tests, tutors, readers, and scribes are some commonly offered supports (Janiga & Costenbader, 2002). Some schools even offer texts on tape and assistance with registering for classes (Janiga & Costenbader, 2002). However, high school students with disabilities may want to meet with service providers at the schools they are considering in order to determine the exact supports that will be available to them prior to attending (Janiga & Costenbader, 2002). It is also suggested that high school students find someone to help them request financial aid if necessary, as well as develop some good stress management skills (Janiga & Costenbader, 2002).

Overall, the transition team and other high school staff and faculty should make sure that every student with a disability has a thorough transition plan put into place by the end of their freshman year of high school in order for that student to successfully move into the postsecondary program of their choice (Janiga & Costenbader, 2002). If this does not happen, evidence shows that many high school graduates that have disabilities but did not have a successful transition plan end up unemployed or under paid (Janiga & Costenbader, 2002).

Studies have shown that in order for a student with a disability to be successful once they reach the college level, they must possess average intelligence, have completed a high school curriculum that has prepared them for their area of study, have been successful in their English classes, possess a GPA of 2.5 or higher, possess the motivation and persistence to keep up with the competition, have good study skills and strategies, have well-developed social and interpersonal skills, and choose programs that are suitable for their goals, skills, and interests as identified by them and their transition team (Janiga & Costenbader, 2002). Students with Asperger Syndrome meet much of these criteria, but may lack the acceptable English grades, study skills, and social skills to be successful in college. College life itself may also be too challenging for a student with AS if they do not receive support making the transition from secondary to postsecondary school, and continued support while they attend the postsecondary school of their choice (Gibbons, 2008). Supports for the college student with AS must include assistance with social skills and developing a routine they can rely on in order to become comfortable with the college atmosphere (Gibbons, 2008). Routine is essential to a person with AS for major changes can cause anxiety and therefore require a great period of adjustment

(Gibbons, 2008). A student with AS may also want to meet other students with AS who are currently attending college, or have already completed a college program, in order to better prepare themselves for the transition (Brinckerhoff, 1996).

IV. The College Perspective: Admissions, Policies, & Practices

When a student with a learning disability reaches college age, there are several things they need to become aware of if they wish to consider continuing their education. First of all, instead of qualifying for special services under the IDEA, as was the case when they were attending high school, students in higher education must meet qualifications according to the Americans with Disabilities Act (ADA) of 1990 (Janiga & Costenbader, 2002). Secondly, although a student with a disability cannot be discriminated against and must receive reasonable accommodations, federal law does not specify what constitutes as “reasonable”, and offers no guidelines that postsecondary institutions must follow (Scott, 1994). This lack of specification and change of rules surrounding who can receive accommodations and who no longer qualifies may cause many problems for high school students trying to get into a postsecondary program.

For a student to qualify for special services in higher education, they must either be able to provide current proof of a disability, demonstrate a disability and meet the requirements for qualification at the school to which they are applying, or have a history of possessing a disability (Scott, 1994). Another definition states that “a qualified student is one who can meet essential requirements of a task in spite of the disability when provided reasonable accommodation” (Scott, 1994). However, even if a student does qualify for special services upon admittance to a postsecondary school or program, they may not keep this status throughout their entire schooling career. They will be

continuously assessed to make sure they are receiving only the accommodation they require to successfully complete their coursework (Scott, 1994). It might also be important to keep in mind that the institution is allowed to set and change the criteria for qualification as long as the requirements are applied to each and every student, and the criteria are reasonable in relation to the student's course of study (Scott, 1994).

In any case, students with learning disabilities should still be encouraged to extend their education past high school. Many colleges, universities, and other postsecondary institutions have developed special programming in order to better accommodate and support students of all types. As stated previously, a student's transition planning team can help them determine the right type of program to aspire to, and help that student through the application process. Also, since all postsecondary institutions must provide for the acceptance and support of students with disabilities (Scott, 1994), it is suggested that a student with a LD make their disability known to the college of their choice to avoid surprises later. For example, if a student with a disability gets accepted to and begins attending a college and finds after the first semester that the work load and adjustment to college life may be too much for them to handle without proper supports, they might get discouraged and refuse to continue with their college experience.

Many institutions will consider and perform various accommodations requested by its students, such as changes to its admissions and housing policies and procedures. However, some policies, standards, and procedures are critical and therefore cannot be altered (Scott, 1994). For instance, some academic standards cannot be changed for fear that this will weaken the integrity of the program (Scott, 1994). This means the school will have to deny some students with LD various forms of accommodation, but only with

good reason (Scott, 1994). Institutions of higher education will typically extend time and timelines for students with LD, modify evaluations and evaluation processes, allow course substitutions, and adjust certain courses in order to accommodate students with LD, but again will not negotiate requirements that are vital to the program, course of instruction, or that are directly related to licensing requirements (Scott, 1994). In order to ensure that students with disabilities do not suffer academically due to the lack of certain supplementary aids (taped texts, orally delivered material, readers, etc.), these items must be made available at no cost to the student (Scott, 1994). Also, instructors may not enforce rules that may limit the participation of students with disabilities such as prohibiting tape recorders in the classroom (Scott, 1994).

Whenever a student requests an accommodation, it is up to the school to decide if the accommodation is necessary for that student's success before they implement it. If, however, the student cannot prove that the accommodation is needed, the school may refuse to allow the accommodation even if that student qualifies as learning disabled (Scott, 1994). In order to prove the need for an accommodation, the student may have to present documentation that shows the effects of their disability on their performance, and the type of documentation required will depend on the nature of services requested by the student (Scott, 1994). If the student can prove a need for an accommodation, the service providers must then make sure the accommodation does not interfere with the academic standards of the course for which the accommodations were requested (Scott, 1994). This process occurs on a somewhat regular basis, and it is not uncommon for service providers in college settings to consult with faculty and staff to avoid interfering with curriculum and safety issues (Scott, 1994). It may also be important to keep in mind that

services such as tutoring for students with LD is considered more of a personal service and is therefore not a required accommodation at many schools (Scott, 1994).

Students with LD that require special services should not be made to pay for these services. A school cannot refuse an accommodation based on cost alone, but may opt to try cheaper alternatives before more costly ventures (Scott, 1994). Institutions are also permitted to deny an accommodation if the magnitude and type of program is considered unreasonable (Scott, 1994). Additionally, a student cannot be kept from participating in any school functions or programs because of the stereotype that may surround their disability, and accommodations based on disability labels rather than an individual's needs may frustrate students, confuse faculty, and weaken the credibility of the accommodation process (Scott, 1994). Several different accommodations may also be tried before the right one is found, namely one that allows the student the most inclusive college experience possible (Scott, 1994).

V. College Supports for Students with Learning Disabilities

The increase in services for students with special needs at the postsecondary level has allowed these students opportunities they could not have imagined only years ago (Sparks & Lovett, 2009). However, even with these new programs and technologies, students with learning disabilities still face several disadvantages at the college level. First of all, many students with LD do not complete the amount of college prep classes in high school that most colleges prefer, which results in the student with LD having insufficient content knowledge and few of the skills necessary to be successful in college (Sparks & Lovett, 2009). Secondly, although many students with LD are guided toward appropriate postsecondary programs, some are not so lucky and receive little help figuring out which

path is right for them (Sparks & Lovett, 2009). And finally, as stated before, some students that qualify for special services at the high school level may not meet the criteria as “Learning Disabled” at the postsecondary level (Sparks & Lovett, 2009).

Since many college students with LD tend to possess average IQs, colleges can develop programs to focus more on their areas of deficit, such as reading (especially comprehension and reading rate), math skills (particularly application, abstract, and problem solving skills), and writing (Sparks & Lovett, 2009). Other difficulties might include deficits in study skills, organizational skills, social skills, and overall adjustment to college (Vogel, Fresko, and Wertheim; 2007). Additionally, many students with LD are often granted course substitutions for foreign language classes because of their common hardship with such courses (Sparks & Lovett, 2009). In any case, the student must produce the required documentation to prove that he or she is at a disadvantage due to a disability, and is therefore entitled to accommodations of some sort (Sparks & Lovett, 2009). Otherwise, truly capable students could take advantage of the special services offered by their school.

Humanities, social sciences, and foreign language classes were reported to be the most difficult for student with learning disabilities (Heiman & Precel, 2003). It was also found that these students developed unusual study and learning strategies (i.e. singing, chanting, marking, drawing) when not instructed in research-based approaches (Heiman & Precel, 2003). Students with LD also reported that they preferred oral and visual explanations over more written examples, and were mostly concerned with lack of time and the ability to concentrate during examinations (Heiman & Precel, 2003). Nevertheless, students with LD tend to believe that nothing can help them learn faster

(Heiman & Precel, 2003), and that is exactly what some researchers and educators are trying to change by creating new programs and services to help these students achieve success.

Some of the modifications that college students with LD may receive include extra time during exams and for the completion of a project; copies of a peer's notes and/or outlines; alternative assessments; having spelling mistakes ignored; the use of a computer; and being allowed to take more breaks during an exam (Heiman & Precel, 2003). Private tutors and tape-recorded materials are also sometimes provided and helpful to students with LD (Heiman & Precel, 2003). All of these accommodations may help improve a student's grades, but what about other disabilities? What if the student suffers from inadequate social skills, or simply cannot adjust to college life? When students with disabilities enter college, their motivation, need for order, and compensatory and social skills are really put to the test (Heiman & Precel, 2003). Any support these students can receive in these areas is very helpful.

One service commonly provided in support centers to help with these specific deficits is peer tutoring (Vogel et al., 2007). One pilot program in Israel, the PERACH Peer Tutoring Project, published findings that showed that according to students with learning disabilities, peer tutoring was an effective and beneficial intervention (Vogel et al., 2007). However, some suggestions were given for future reference on ways to create and manage a more effective tutoring program. For instance, Vogel et al. suggested that tutors and tutees be of the same major or area of study, and tutors should be supplied with special training on the specific learning disabilities they will be facing while tutoring, and ways to manage the needs of students with various disabilities (Vogel et al., 2007). Also,

it was suggested that more tutoring time should be spent focusing on organizational skills, learning strategies, and self-advocacy skills (Vogel et al., 2007).

Overall, many students with learning disabilities reported higher levels of stress and anxiety, lower self-efficacy, and greater differences between their abilities and their achievements at the college level (Heiman & Precel, 2003). Workshops that help manage feelings, time, and workload have proven to be positive supports for students with and without disabilities (Heiman & Precel, 2003). There are also programs and services to help students with LD with other common deficits, such as in perception, reasoning, symbolic representation, and memory (Heiman & Precel, 2003). In any case, many factors must come into play for a student with a learning disability to succeed at the college level. For instance, the student must put forth tremendous effort and develop certain strategies to help them overcome their learning difficulties (Heiman & Precel, 2003). We should never stop investigating the effective learning strategies used by students with LD, and must continue exploring various teaching methods and special services to help support all of the needs of these students (Heiman & Precel, 2003).

VI. College Supports for Students with Asperger Syndrome

We know what supports are available for college students with learning disabilities, but what supports are provided specifically for a college student with Asperger Syndrome? In order to answer this question, we first need to identify the specific needs of a college student with AS. These needs include those that will help the student adjust to the college environment emotionally, behaviorally, academically, and most importantly socially. Since a student with AS typically suffers by and large from social deficits, this is the area that will most likely require the majority of support from college

services. However, since AS has only been researched over the past twenty years in the US, empirical studies are limited, and there is very little literature on which interventions work best for students with AS, especially in higher education (Smith, 2007). This, unfortunately, results in students with AS receiving the same accommodations as students with various other diagnoses, which are not always necessary or effective (Smith, 2007).

We know that individuals diagnosed with AS have difficulties with social situations, communication, adapting to new situations, and changing routines, so scheduling classes for students with AS needs to be a well thought out process (Smith, 2007). Also, as stated before, students with AS should be specifically taught and given opportunities to practice advocating for themselves in order to better express their needs to service providers and instructors at the postsecondary level, as well as opportunities to interact with their peers in informal situations (Smith, 2007). Additionally, since individuals with AS lack organizational skills and abstract thinking, it is suggested that those working with them be as specific with instructions as possible, and provide information in very concrete and multi-modal ways if possible (Smith, 2007). Other accommodations commonly offered to students with AS include: reasonably reduced course loads, flexible attendance, preferential seating, note-taking assistance, special housing accommodations, a campus orientation, assistance with registration and financial aid, extended times on exams, alternate testing sites and alternate assessments, alternatives to group work and projects, time management and study skills training, and peer support (Smith, 2007). Some of these may sound familiar since they may also be offered to other students with LD at the postsecondary level.

How can we improve the services offered to college students with AS? One suggestion is to increase the communication and training of faculty and staff members at schools that accept these students (Smith, 2007). This could include workshops, one-on-one discussions, speakers at faculty meetings, the distribution of brochures and so forth (Smith, 2007). Communication should be enhanced between faculty and service providers, as well as between faculty and students in order to improve the experiences of all involved (Smith, 2007). Individualized therapy for social skill development might also be beneficial, but not all institutions have the funds for this type of programming (Smith, 2007). It was also suggested that career counseling (which could include interviewing skills, work ethics, professional work behaviors and the such) be added as another intervention offered to students with AS since their disabilities are lifelong and will therefore affect them even after college (Smith, 2007). Unfortunately, since there are no set boundaries for what is considered a “reasonable accommodation” at the postsecondary level, colleges can offer just as much and just as little as they see fit in order to get the job done (Smith, 2007).

Another type of support that some feel may be the most beneficial to students with Asperger Syndrome involves peer mentoring. With this type of program, it is recommended that the peer be understanding, creative, challenging, and trained to work specifically with students with AS (Wenzel & Rowley, 2010). This peer can then work individually with the student, and can adapt to the changing needs of the student (Dillon, 2007). However, the peer should understand that they cannot provide too much support since that may result in the student with AS becoming too dependent on the peer mentor (Dillon, 2007). Also, service providers can match a student with a peer of the same area

of study, which typically leads to greater success for the dyad (Dillon, 2007). The peer mentor can also intervene when a situation seems to be too much for the student with AS to handle (Dillon, 2007). If this happens, the peer mentor will hopefully then try to strengthen the student's own self-advocacy skills so they can handle the same type of situation in the future without their help (Dillon, 2007).

It was also suggested that postsecondary schools collaborate with local rehabilitation agencies in order to help support students with AS (Dillon, 2007). These agencies typically do not become involved with students with AS until after the student has experienced major difficulties adjusting to college, but they usually have the knowledge and services to help these students (Dillon, 2007). In general, the problems that led to a student with AS leaving the college environment are often the same issues they will face in the workplace (Dillon, 2007). Therefore, collaboration between the student, the college, and the rehabilitation agency can greatly benefit the student with AS, and could potentially lead them to attaining both a degree and a job (Dillon, 2007).

Another way to help students with AS is to provide regular feedback about their performance since these students tend to have difficulty assessing their own work in class (Dillon, 2007). Secondly, time management is also a major issue for students with AS, as stated before, which sometimes results in many unintentionally missed classes and incomplete assignments (Dillon, 2007). Students with AS also tend to make poor judgments regarding how long a project, paper, or task might take them to complete, so any help in budgeting time realistically will be beneficial (Dillon, 2007). Another way to help these students deal with their time issues involves programming their schedule and important dates and times into their cell phones and other personal devices (Dillon,

2007). This way, they can be alerted ahead of time that they have a class soon and where they need to be. Participation both in the classroom and in various college activities is also important for the social learning of each student, and especially for those with AS (Dillon, 2007). For this reason among others, these students should be encouraged to join clubs and participate in a variety of social activities on campus (Dillon, 2007).

The University of Connecticut has developed its own intervention for students with AS which is basically a specialized student success course that these students would take during their freshman year (Wenzel & Rowley, 2010). The class provides them with an overview of the college experience and tips on adjusting to college life, while also working in some vital social training activities (Wenzel & Rowley, 2010). Students that had taken this course explained that they were given the opportunity to interact with others who had similar challenges, and they were provided with indispensable skills and strategies that made their transition to college more seamless (Wenzel & Rowley, 2010). The service providers claimed that the class also makes financial sense since they can utilize instructors already in employment, and can reach many students with special needs at once (Wenzel & Rowley, 2010). Also, since the instructors are familiar to the students and know how to work with this population, the students tended to feel more comfortable in the class (Wenzel & Rowley, 2010).

Information in this seminar class is presented in multiple ways (lecture, handouts, hands-on training, etc.) in order to reach each student regardless of learning style (Wenzel & Rowley, 2010). The course also utilizes social stories (see description in the following paragraph), video-based instruction (description in following paragraph), and personal experiences to help these students comprehend the nonverbal substance of social

situations and environments, life facial expressions (Wenzel & Rowley, 2010). The class provides each student with the opportunity to practice the newly learned behaviors with their peers in order to get real and constructive criticism as opposed to the harsher feedback they might get from others who do not understand their disability (Wenzel & Rowley, 2010). Although this class sounds very beneficial, not all schools will be able to afford the cost, time, and training it takes to establish and run such a program. However, the University of Connecticut suggests that other schools can still take away the basics and use the research and information they provide to develop similar programs of their own (Wenzel & Rowley, 2010).

The seminar course at the University of CT uses social stories and video-based instruction as part of its repertoire. Social stories are a strategy typically used with younger children, but may benefit older individuals with difficulties in social situations as well (Safran, 2001). These short “stories” tend to use simple language in order to basically script a social interaction or behavior, such as greeting people and appropriately asking for assistance (Sansosti & Powell-Smith, 2006). These scripts are sometimes accompanied by visual supports, like illustrations or symbols, and provide “how-to” instructions for commencing, reacting to, and retaining proper social exchanges (Sansosti & Powell-Smith, 2006). Even though there is little research on the effectiveness of social stories as an intervention for people with AS, especially in higher education, it is believed that social stories are attractive to those with Asperger Syndrome since they are very detailed and concrete unlike other methods of social skill instruction (Sansosti & Powell-Smith, 2006). Video-based instruction may be useful for students with AS since they can visually connect certain facial expressions with specific emotions of others, which may

help improve their skills of reading nonverbal cues and empathizing with others (Wenzel & Rowley, 2010).

No matter which type of programming a school decides to provide to its students with Asperger Syndrome, they must continually review and modify the program as needed in order to make it as effective as possible (Wenzel & Rowley, 2010). Also, it is important to request student feedback about what they felt worked for them, and especially what types of supports they wish they had had (Wenzel & Rowley, 2010). And always keep in mind that “It is not the disability that must be accommodated, but rather the individual needs of each student” (Smith, 2007).

Summary

Overall, the literature describing instruction, practices, and interventions for college-level students with Asperger Syndrome is sparse. Almost every article used for this study explained that more research and developments are necessary for us to make improvements in this area. We cannot continue offering these students the same interventions as college students with other disabilities for their needs are very specific and essential for their future success. Support for students with AS should begin in elementary school, and continue into secondary and post-secondary schools to allow for the consistency of continued services, but should adapt to the students’ personal and academic growth.

Chapter 3

Methodology

Setting & Participants:

The peer coaching program at Rowan University used for this research project includes seven peer coaches and 17 students with Asperger's Syndrome or significant characteristics of Asperger's Syndrome. Seven other Rowan students identified as being students with AS chose not to take part in the coaching program. Of the seventeen that participate in this program, only three are female. All of the students were admitted to the university through regular university admission procedures, and all met the same admission qualifications as any student applying to the university. GPAs range from .779 to 4.00, and the students who participate in the program range from the Freshman to the Senior academic level of college. Many of the peer coaches are graduate students at Rowan University, and all participants range in majors and minors. Apart from Asperger's Syndrome, many of the students also possess other disabilities or issues such as ADD/ADHD, anxiety disorders, neurological disorders, dyslexia, Obsessive-Compulsive Disorder (OCD), Pervasive Developmental Disorder (PDD), Central Auditory Processing Disorder (CAPD), and depression.

The Coaching Program:

Rowan University of New Jersey has developed its own intervention to attempt to help aid students with Asperger's Syndrome adapt to the new academic and social environment of college. This peer coaching program began as a program for students with ADD and ADHD, but has been enhanced to focus on many of the needs of those

students on the autism spectrum. Students are encouraged to participate in individual meetings with their peer coach, a weekly support group, and a monthly workshop. The program allows each student to become more acclimated to the campus, and teaches each student study skills, time management, organization skills, and most importantly social skills. This and similar programs may be especially helpful for students with AS due to the unique challenges of the college setting (i.e. roommates, class schedules, freedom, work, diversity, etc.).

The first four weeks of this program cover orientation (assignments of mentors and campus orientation), time management, learning styles, study skills, and advocating for oneself. During this time period, students are assisted in discovering their strengths and weaknesses, and learning how to converse with their professors about their learning styles and issues. Students also sign contracts with their assigned mentors, and guidance is initiated. During the fifth week of the program, students are asked to complete College Management Plans, or CMPs, which consist of the following fields: understanding of disability, organizational plan, time management, study skills, learning style, behavior management, self-esteem, problem-solving, recreation/activity plan, social skills/communication plan, and health maintenance. Three goals are also discussed and agreed upon for each student to complete the CMP. The subsequent weeks involve regular meetings between the student and their mentor, as well as weekly support groups and monthly workshops.

Support and assistance is provided as needed by the mentor and other participants in the program. Each student's CMP is reviewed on a regular basis, as well as each student's academic and social progress. Referrals are also made for subject tutoring,

counseling, and career planning as needed. The last portion of the program covers independence, empowerment, self-regulation, healthy lifestyles, and the evaluation and maintenance of each student's CMP. Topics such as reducing anxiety, test-taking skills, setting and achieving academic goals, anger management, managing stress, communication, and relationships are also covered throughout this 15 week program. Overall, one of the main goals of this program is to help each student become their own advocate.

Research Design & Procedure:

The research design used for this project is both descriptive and experimental. Likert-style surveys were distributed to both the coaching staff and students involved in the program (please refer to Appendices). The surveys used for the coaches had only slight changes in phrasing from the surveys used for the students whenever appropriate. Each survey begins with a section appraising the individual's opinion of their abilities in certain areas including general study skills, academic skills, and nonacademic skills (mainly more social skills). The second part of the survey assesses the individual's opinion about how their time was spent during the coach-to-student meetings that took place (i.e. time spent on study skills, organization, time management, etc.). The next several sections focus on the student-coach relationship and more personal aspects of the coaching dyad. Lastly, the survey poses some basic biographical questions, as well as some open-ended questions about the individual's experience with the program and any suggestions they might have for its improvement. Each survey attempts to maintain anonymity throughout, and is purely voluntary.

In order to maintain anonymity, each coach was given an envelope and survey for each student they coached in addition to a larger envelope for collecting their student's surveys and their coaching survey. Each coach was also assigned a letter and was asked to have their students mark their envelopes with the same letter in order for comparisons to be made between each coach's opinion of the program and time spent during coaching sessions to that of the students they coached. However, some individuals involved in the program felt this letter system and some of the biographical data collected through the surveys thwarted the anonymity of the surveys. Regardless, the identities of those involved in the program are still and shall remain unknown to this researcher.

Chapter 4

Data Analysis

Surveys were distributed to the students and their peer coaches in order to gain information and data on the effectiveness of the program. Of the students who responded to the survey, 86% were male and 14% were female. 43% of the students that responded to the surveys are seniors, 29% are juniors, and 29% are freshmen. 71% of the student responders are Caucasian, 14% are African American, and 14% are Asian/Pacific Islanders. 57% of the students responders majored in the sciences, while 43% are involved with communications, media, or advertising. Of the students that responded to the surveys, 43% live on Rowan's campus with roommates while 29% live on campus with no roommates, 14% commute, and 14% live on their own. 43% of the student responders are involved in one activity in addition to the peer coaching program for students with Asperger's. 14% of the responders are involved in two additional activities, 29% are involved in three or more additional activities, and 14% are not involved in any additional activities.

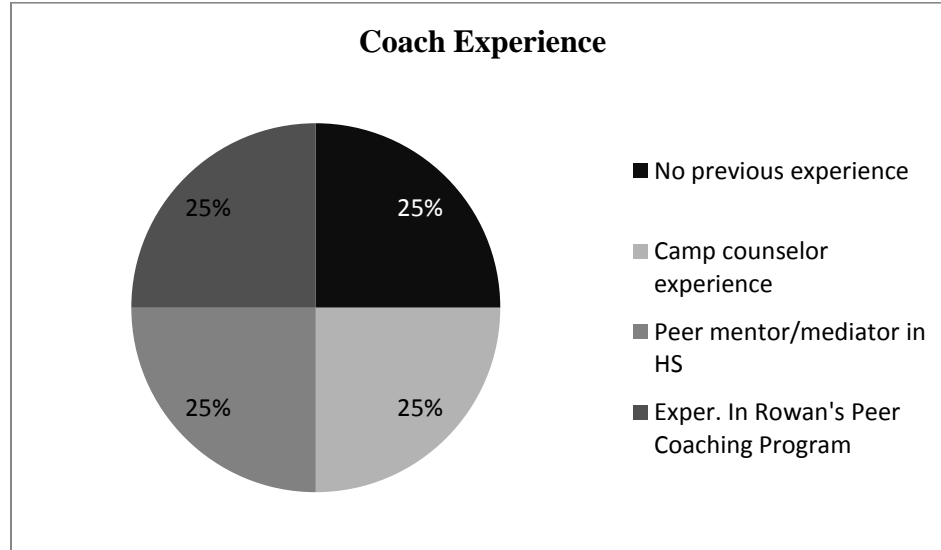
Comparatively, all of the coaches that responded to the survey are female. Half of the coaches that responded are graduate students at Rowan University, 25% are seniors, and 25% are non-students. The coaches themselves lived in various conditions that ranged from off campus to living at home to living on campus with a roommate. Table 1 presents these results. 25% of the coaches that responded stated they had had no previous experience as a peer mentor or coach. Another 25% had experience as camp counselors and the sort, and another 25% had experience as peer mentors/mediators in high school. The remaining 25% had previously participated in Rowan's peer coaching program for

students with AS and therefore had experience with the population and the purpose of the program. Figure 1 presents these results.

Table 1: Demographic Information

Demographic Information	Student %	Coach %
Gender: Male	86%	-
Gender: Female	14%	100%
Grade level: Freshman	29%	-
Grade level: Junior	29%	-
Grade level: Senior	43%	25%
Grade level: Graduate Student	-	50%
Grade level: Non-Student	-	25%
Race: Caucasian	71%	75%
Race: African American	14%	-
Race: Asian/Pacific Islander	14%	-
Race: Not Identified	-	25%
Major: Sciences	57%	50%
Major: Communications/Media/Advertising	43%	-
Major: Not identified	-	50%
Living Situation: On-campus with a roommate	43%	25%
Living Situation: On-campus without a roommate	29%	-
Living Situation: Commuter	14%	25%
Living Situation: Live on their own	14%	25%
Living Situation: Not identified	-	25%
Activities: Involved in one other than Peer Coaching Program	43%	25%
Activities: Involved in two other than Peer Coaching Program	14%	-
Activities: Involved in three or more other than Peer Coaching Program	29%	-
Activities: Involved in none other than Peer Coaching Program	14%	-
Activities: Not identified	-	75%

Figure 1: Coach Experience



Data gathered through the surveys revealed that more than half of the students involved in the peer coaching program believe they excel in finishing work (71%) and talking to other people regardless of their disabilities (57%). About half (43%) believe they excel in memory, using math, participating in the classroom, and making friends. On the other hand, more than half of the students (57%) stated they had difficulty with studying for exams, writing papers, and understanding the emotions of others. Additionally, about half of the students (43%) had difficulty in attention and concentration, memory, summarizing articles, using math, and participating in groups and group work. With regard to grade point average, 45% of the students experienced an increase in their GPA after participating in the peer coaching program. Additionally, 41% of the student responders' GPAs stayed the same, while 14% experienced a decline in GPA. Figure 2 presents this information.

Comparatively, all of the peer coaches that responded to the surveys believe they excel in finishing work and understanding emotions in others. 75% of the coaches believe they excel in using time, writing papers, summarizing articles, finding

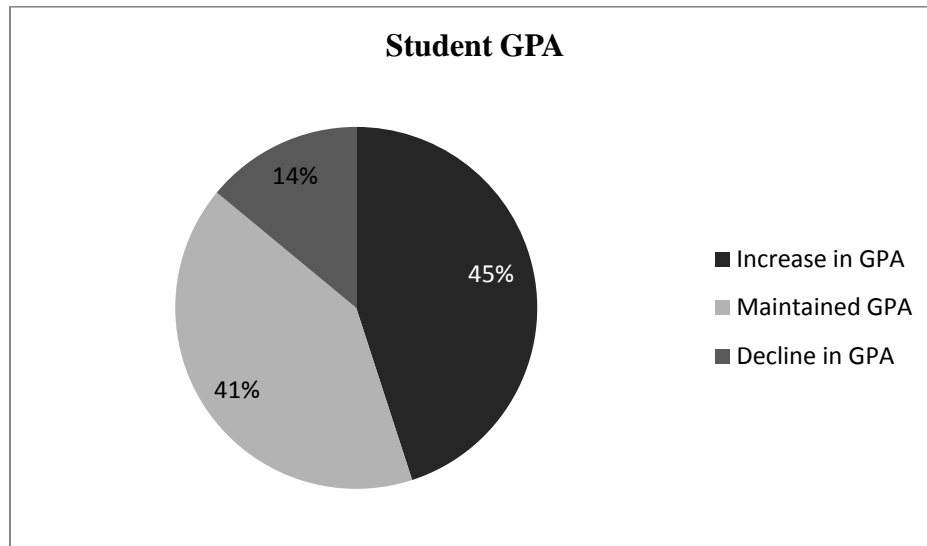
information, and participating in the classroom. Exactly half of the coaches also feel they excel in studying for exams, using math, attention and concentration, participating in groups, expressing their own emotions, making friends, and talking to other people. On the other hand, half of the coaches that responded to the survey stated that they had difficulty with memory, 25% had difficulty using math, and 25% had difficulty participating in the classroom. Table 2 presents these results.

Table 2: Personal Strengths & Weaknesses

Strengths	Students	Coaches
Finishing work	71%	100%
Talking to others	57%	50%
Memory	43%	
Using math	43%	50%
Participating in the classroom	43%	75%
Making friends	43%	50%
Understanding emotions in others		100%
Using time		75%
Writing papers		75%
Summarizing articles		75%
Finding information		75%
Studying for exams		50%
Attention & concentration		50%
Participating in groups		50%
Expressing one's emotions		50%

Weaknesses	Students	Coaches
Memory	43%	50%
Using math	43%	25%
Participating in the classroom		25%
Understanding emotions in others	57%	
Writing papers	57%	
Summarizing articles	43%	
Studying for exams	57%	
Attention & concentration	43%	
Participating in groups	43%	

Figure 2: Student GPA

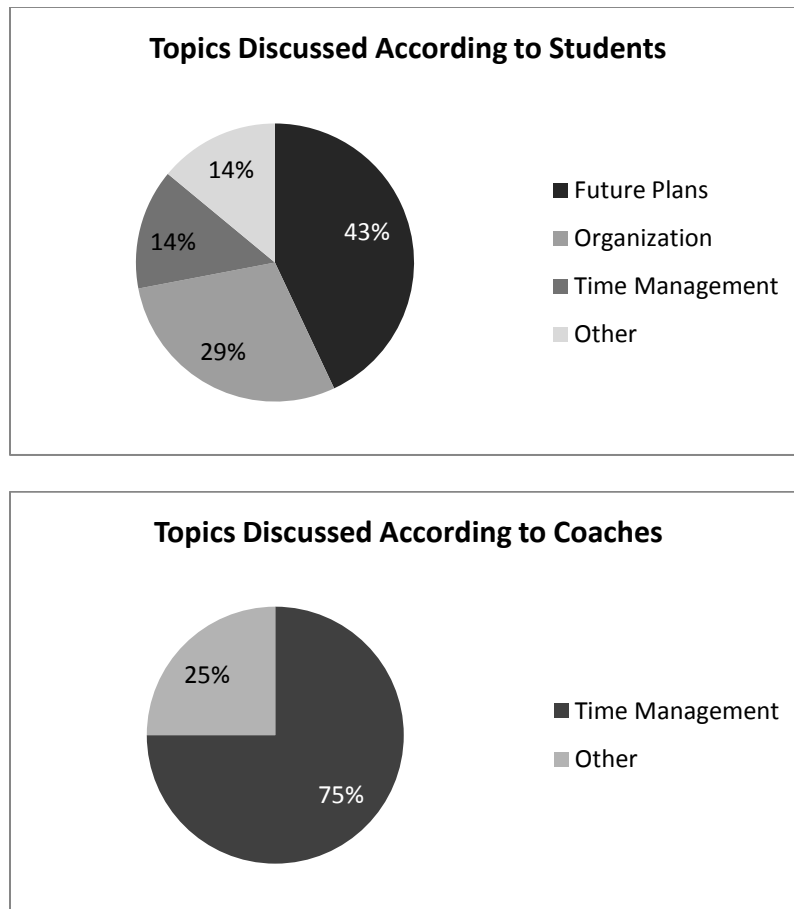


With regard to what was discussed and reviewed during the coaching sessions, a little less than half of the students that responded to the survey (43%) stated that they feel discussing future plans, organization, and time management were the three topics they discussed the most throughout their sessions. 29% of the student responders feel that most of their time was spent on working on learning strategies, discussing personal matters, and discussing social issues. 14% of the student responders feel that most of their time spent involved reading articles or books, working on study skills, and reviewing class materials. On the other hand, 43% of the student responders feel that no time was spent reading articles or books, and 14% feel that no time was spent on organization, discussing social issues, reviewing class materials, and writing papers.

Comparatively, 75% of the coaches that responded to the survey stated that they feel most of the time in their coaching sessions was spent on time management. 50% of the coach responders also feel that much of their time was spent on study skills, learning strategies, reviewing class materials, and organization. 25% of the coach responders also feel that much of their time was spent discussing future plans, writing papers, and reading

articles or books. On the other hand, half of the coaches feel that they spent the least amount of time writing papers, while 25% feel the least amount of time was spent on reading articles or books and discussing personal matters. This information is presented in Figure 3.

Figure 3: Topics Discussed



A little less than half of the student responders (43%) claimed they feel their coaches did not necessarily have someone to go to for guidance during their time spent as a peer coach. 29% of the students feel that it is somewhat true that their coach took time to establish a good relationship with them, that they were only somewhat knowledgeable in their student's content area, and that the coaching sessions were only somewhat effective. 14% of the students feel that their coach was not knowledgeable in their content area at

all, that their coach did not completely know how to deal with their students' disabilities, that their coach did not necessarily ask about their students' learning needs, and that they might not have given their students the amount of time they felt they needed.

Comparatively, 75% of the coaches feel they did not have someone to go to for guidance if they needed it throughout their coaching experience. All of the coaches feel that they are knowledgeable in their students' content areas, that they asked about the learning needs of their students, feel that they provided as much time as necessary to each of their students, and that they took the time to establish a good relationship with each of their students. All of this information is presented in Table 3.

Table 3: Feelings towards coaching elements

Feelings toward coaching elements	Students	Coaches
Coaches did not have someone to go to for guidance	43%	75%
Coach somewhat took time to establish a good relationship w/ the student	29%	
Coach took the time to establish a good relationship with each student		100%
Coach was not knowledgeable in student's content area at all	14%	
Coach was somewhat knowledgeable in student's work content area	14%	
Coaches are knowledgeable in students' content areas		100%
Coach did not necessarily ask about their students' learning needs	14%	
Coach did ask about their students' learning needs		100%
Coach may not have given their students the amount of time they needed	14%	
Coach provided as much time as necessary to each of their students		100%
Coach did not know how to deal with their students' disabilities	29%	
Coaching sessions were somewhat effective	29%	

Finally, 29% of the student responders feel that coming from the same type of community as their coach is very important. Additionally, 14% of the students feel that being of the same gender and same major as their coach is very important. Conversely, 43% of the students that responded felt that being of the same gender was not very important. Moreover, 29% of the students feel that coming from the same type of community, sharing a major, and attending the same courses are not important factors for a successful match between coach and student. As far as the coaches were concerned, only 25% feel that sharing a common major is important. None of the coaches feel that attending the same courses as their students or being of the same gender as their students is very important. Furthermore, half of the coaches feel that sharing a common major is not important. This information is presented in Table 4.

Table 4: Importance of Factors

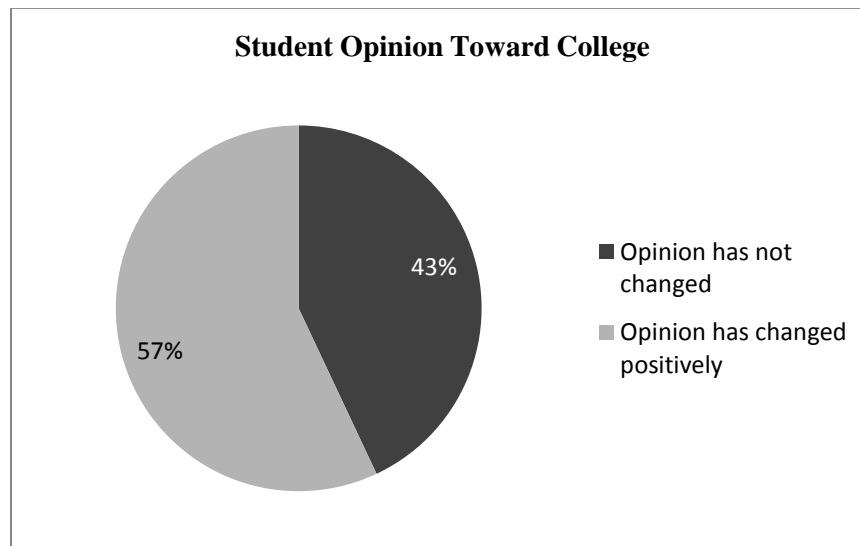
Importance of Factors/Elements of Coaching	Student	Coach
Coming from the same community is very important	29%	0%
Coming from the same community is not very important	29%	25%
Being of the same gender is very important	14%	0%
Being of the same gender is not very important	43%	100%
Sharing a major is very important	14%	25%
Sharing a major is not very important	29%	50%
Attending the same courses is very important	0%	0%
Attending the same courses is not very important	29%	100%

After participating in the peer coaching program at Rowan University, 43% of the students that responded stated that their opinion about college has not changed.

However, 57% of the student responders stated changes in opinion that include more

familiarity with the resources and services offered at the university, they feel more organized and focused, their time is better managed, they have developed better study habits, they are getting more involved with clubs and organizations within the university and their communities, they are less stressed, they look forward to assignments as opposed to dreading them, and some finally realize they cannot complete their work like they used to in high school. Figure 3 presents this information. 29% of the students also explained that they had prior experience in a mentoring or coaching program in high school, but had nothing like the program at Rowan. 57% of the students have been involved with Rowan's program since their freshman year at the school.

Figure 4: Student Opinion



Overall, 71% of the students that responded to the survey agree that they had developed a good relationship with their coach and would recommend participation in the program to others. 57% of the students also stated they are very satisfied with what they learned from the coaching experience. From the coaching perspective, all coaches stated they feel they developed good relationships with their students and are satisfied with their coaching experiences. However, 25% of the coaches stated they may not participate in

the program again, but their involvement did help them recognize the challenges that others face in school. Some suggestions given to improve the program for future students include pairing students with coaches of the same major, calling or notifying the students other ways to remind them about meetings more often, and specializing or testing more for specific learning weaknesses and disabilities to get more insight on how to handle each student's particular issues.

Table 5: Overall Feelings

Overall Feelings Toward Peer Coaching Program	Students	Coaches
A good relationship was formed between coach and student	71%	100%
Individual would recommend program to others	71%	75%
Satisfied with what was learned/experienced in program	57%	100%
May not participate in program again	0%	25%

Chapter 5

Discussion

This study aimed to discover whether a specialized support program for college students with Asperger's Syndrome could improve student learning and socialization outcomes. A program developed by Rowan University in Glassboro, New Jersey was examined, and its effectiveness was gauged by surveying the students and coaches involved in the program, and by analyzing the pre- and post-program academic records of the students involved. Overall, it seems that a greater percentage of students experienced a rise in GPA after their participation in the peer coaching program at Rowan University, and claimed to enjoy the experience and would recommend it to others. Many of the students also explained that their opinion about college and university life improved during and after their time spent in the program for various reasons.

Suggestions for the improvement of Rowan's peer coaching program from the students included pairing students with coaches of the same major, reminding the students more often of meeting and activity starting times, and testing more for specific weaknesses to better support the students' needs. Many of the students also explained that they had had previous experience with support programs in high school, but those programs were not as valuable. Therefore, it is believed that a support program, much like the one at Rowan University, may prove to benefit younger students as well. However, there seems to be a lack of programs that focus on the specific needs of students with Asperger's Syndrome, who have the intelligence and capabilities to do great things, but lack the interactive and social skills to make these abilities work for

them. If more schools of all levels developed programs to assist these individuals in everyday life, we may begin to see the true potential of this population.

Like Vogel et al., the students of Rowan's peer mentoring program suggested that tutors or coaches be of the same area of study as the students they work with, and that the tutors/coaches be trained to manage the specific needs of the students with whom they work (Vogel et al., 2007). Time devoted to focusing on organizational skills, learning strategies, and self-advocacy skills was also suggested, and these skills among others were addressed by each of the coaches in Rowan's program (Vogel et al., 2007). Other proven positive supports for students with special needs were also reviewed by the coaches in Rowan's program, including workshops to help manage feelings, time, and workload (Heiman & Precel, 2003). Additionally, one of the main focuses of Rowan's peer coaching program is teaching the students how to advocate for themselves, which is a skill that every student should acquire by the time they graduate regardless of disability, keeping in mind that "it is not the disability that must be accommodated, but rather the individual needs of each student" (Smith, 2007).

Some of the students in Rowan's peer coaching program also stated that one improvement to the program would be to send out more reminders more often about meetings, workshops, and activities so that the students do not miss them. The time management issues that individuals with Asperger's Syndrome have are well known, and therefore this notification system might benefit many students (Dillon, 2007).

Additionally, people with AS also tend to misjudge how long a project, paper, or task might take them to complete, so any help in budgeting time realistically will be beneficial. Programming schedules and important dates and times into cell phones and

other personal devices may also improve the way individuals with AS manage their time (Dillon, 2007). Furthermore, for any peer mentoring program, it is recommended that the peer be understanding, creative, challenging, and trained to work specifically with the issues their students will have (Wenzel & Rowley, 2010). This is especially true for students with AS in higher education that need to adjust quickly to the demands of college as if they are students without disabilities. Rowan takes this into account when they choose and match their coaches with students.

Previous research has shown that social skills do not improve with age for people with AS (Saulnier & Klin, 2007), and yet it is these skills that lead to more positive interactions and experiences with others at school and in the workplace (Rao et al., 2008). Rowan's program was created with this knowledge in mind. An increased use of social skills may also improve one's academic skills and overall mental wellbeing (Rao et al., 2008), which we can see through the experiences of the students that took part in Rowan University's peer coaching program. Rowan's program also helped its students develop other useful skills that they can use outside of the classroom including being more independent, good note taking skills, effective learning strategies, integrating information, paraphrasing, and improved memory techniques.

Rowan's peer coaching program for students with AS has many similarities with the University of Connecticut's student success course. Like Rowan, the class at the University of Connecticut provides its students with an overview of the college experience and tips on adjusting to college life, while also presenting some vital social training activities (Wenzel & Rowley, 2010). Students that had taken this course explained that they were given the opportunity to interact with others who had similar

challenges, and they were provided with indispensable skills and strategies that made their transition to college more seamless. The same reactions were felt by many of the students in Rowan University's program. And even though the University of CT only offers their program to freshmen and utilizes instructors as opposed to peers, both programs agree that getting student feedback is necessary for improvement (Wenzel & Rowley, 2010).

With regard to the classroom, it is hoped that this research project will show the need for better accommodations and supports for students with Asperger's Syndrome in all levels of education. These students are typically found in regular education classrooms, and left to fend for themselves in many ways. Without additional training with social, time management, and organizational skills, these students may never get to experience the success they're capable of. The public needs to be aware that people with Asperger's do not mean to come off as weird, ignorant, or sarcastic. They cannot help that they don't understand sarcasm, body language, or many abstract and non-literal concepts. They need acceptance and appropriate support just like any other disabled person. As this research project shows, these students can improve and learn how to better manage their lives if given some guidance in how to do so.

With regard to the entire Asperger population, this research project featured students with more interest in the sciences than the arts (as seen through the majority of majors in the sciences), which is typical for those with Asperger's Syndrome since they tend to be more logical and concrete, just like science. The question of housing on the survey was asked of the students to determine how many of them are living with a roommate (or multiple roommates) and therefore how many might need specific social training on how

to handle living with non-family members who may not understand their differences. Additionally, the fact that many of the students involved in Rowan's Peer Coaching Program are also involved in other activities is nice to see. This means that these students are finding, or at least trying to find, different social outlets. It might be interesting to find out if these students joined those other programs before or after they began participating in the coaching program for students with AS.

The data gathered from this research project also shows that these students in particular seem to feel that their common weaknesses are in understanding emotions in others, writing papers, and studying for exams. On the other hand, their strengths include finishing work and talking to others (which is not a typical strength for individuals with AS). Comparatively, the coaches' surveys showed that their main strengths include finishing work and understanding emotions in others. Many of the students and coaches all agreed that the coaches themselves could have used someone to go to for guidance throughout their coaching experience. This information may be very useful to those involved in the future planning of the Peer Coaching Program, especially with regard to its organization and the content of the activities and workshops they provide.

If this research project were to be repeated, it is suggested that the coaching survey be reworded so it asks the coaches to describe the needs of the students with which they worked, not of themselves. This information would show us if the students and coaches agree on areas of improvement. For example, if a coach and their student both agree that the student's main area of weakness is writing, then we know the student can identify their needs and can therefore seek help in those areas. However, if a student believes they excel in writing, but their coach believes writing is one of their weaker areas, we can

infer that the student may not understand what their weaknesses are, and why their grades do not reflect their abilities. It is thought that many students with Asperger's Syndrome may misinterpret directions, motives, and explanations, and therefore are not sure how they can improve. If their coach can determine this misunderstanding, they can show their student ways to improve in their weaker areas.

Also, better explanations for the purpose of the surveys might be advisable, as well as some editing of the surveys to shorten them for the students. These suggestions are due to the fact that a number of the students and coaches refused to fill out the survey due to its length and content. Two of the coaches also explained that they felt the surveys were not completely anonymous, and some of the questions were too identifying. These coaches did not complete the surveys in their entirety. Additionally, only a quarter of the coaches offered feedback as to how the peer coaching program could be improved. These negative responses were unexpected, especially considering the Informed Consent Forms that accompanied the surveys.

The main limitation of this study was its small sample size. Only seventeen students and seven coaches participate in Rowan University's peer coaching program for students with Asperger's Syndrome. Another limitation would again be the lack of response to the surveys. Only seven of the students in the program completed surveys, and only four of the seven coaches that participate in the program completed their surveys. Additionally, not one of the coaches completed the entire survey, or provided feedback for the improvement of the program. Regardless, information was still able to be extrapolated from the limited amount of response.

Overall, it seems that a peer support program for college students with social deficiencies, and especially those with AS, is a good idea and can benefit students with various disabilities. However, it is suggested that the students and their coaches be paired according to major, and that the coaches receive specialized training to help them manage the needs of their students more effectively. In addition, there should be more guidance and support for the coaches themselves for many of those involved in the program at Rowan felt they could have used some help at times. In spite of these suggestions, more than half of the students involved with Rowan's program claimed that it has improved their outlook on school, social skills, organizational and time management skills, study and learning skills, and has reduced their level of stress in school. Almost all of the students also maintained their GPAs or experienced a rise in their GPA as a result of this program as well. Most would agree that these facts describe a successful program.

Conclusion:

In this research project, the Peer Coaching Program for Students with Asperger's Syndrome (or with demonstrated weaknesses similar to AS) at Rowan University in Glassboro, New Jersey was analyzed for effectiveness. The program's seventeen student participants and seven coaches were surveyed in order to attain data on the demographics of each group, their skills, their weaknesses, and their experiences within the program. It was found that most of the students were able to either maintain their GPAs or raise their GPAs while participating in the program, and all were exposed to various social skill training activities and workshops to help them with organization, time management, stress management, study skills, and other types of practical and functional skills. Many

of the students also explained that they formed many positive relationships during their time involved with the program.

The peer coaches claimed to enjoy their time spent working with the students as well, and learned much about themselves throughout the process. The students and coaches alike stated that they would recommend this program to others, and would participate in it again. Some suggestions for improvement were made by the students who participated in the program, however, which included pairing students with coaches of the same major. Other suggestions included providing better training and more support for the coaches involved in the program, and testing the students in order to discover their specific needs and ways to manage their needs. Results show that this program is effective in various ways with helping students with AS and other disabilities adjust to college life and learn skills that will also help them be successful in the future.

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Appendix A: Student Survey

Please fill out this survey honestly and anonymously so that we may improve this program for future students. When completed, please seal this survey in your assigned envelope and give the envelope to your peer coach.

Thank you very much for your time, and we hope you had a great semester!

Please check which number best represents your degree of ability in each area using the following code: 1 = I have a lot of difficulty in this area 2 = I have some difficulty in this area 3 = I have acceptable skills in this area 4 = I excel in this area				
Ability Areas	1	2	3	4
General study skills				
Attention and concentration				
Studying for exams				
Use of time				
Memory				
Finishing work				
Academic skills				
Writing papers				
Summarizing articles				
Finding information				
Using math				
Participating in groups				
Participating in the classroom				
Nonacademic skills				
Understanding emotions in others				
Expressing my emotions				
Making friends				
Talking to other people				
Please check which number best describes the amount of coaching time spent on each area using this code: 1 = No time was spent on this activity 2 = A little bit of our time together was spent on this activity 3 = Much of our time together was spent on this activity 4 = Most of our time together was spent on this activity				
Time Spent on Activities	1	2	3	4
Study skills				
Working on learning strategies				
Reviewing class materials				

Writing papers				
Reading articles/books				
Organization				
Time management				
Discussion of future plans				
Discussion of personal matters				
Discussion of social issues				
<p>Please use the following code to rate the effectiveness of your coaching experience:</p> <p>1 = Not true 2 = Somewhat true 3 = Very true</p>				
Coaching	1	2	3	
My coach had the skills to deal with my learning difficulties				
Our coaching sessions were effective				
My coach was knowledgeable in my content area				
My coach had someone to go to if they needed guidance				
My coach asked about my learning needs				
My coach gave me as much time as I needed from them				
My coach took the time to establish a good relationship with me				
<p>Please use the following code to rate the importance of common experiences:</p> <p>1 = Not important 2 = Somewhat important 3 = Very important</p>				
Common Experiences	1	2	3	
Sharing a common major				
Attending the same courses				
Coming from the same type of community				
Being of the same gender				
<p>Please use the following code to rate your satisfaction with each category:</p> <p>1 = Not true 2 = Somewhat true 3 = Very true</p>				
Satisfaction	1	2	3	
My coach and I developed a good relationship				
I am satisfied with what I learned from my coaching experience				
I would recommend participation in this program to others				

Background Information:

Gender (circle one): Male Female

Race (circle one/optional): Asian/Pacific Islander African American Hispanic
Native American/Alaskan Native Caucasian (not of Hispanic
origin)

Year of study (circle one): Freshman Sophomore Junior Senior

Field of study (major/minor):

Please describe your living situation (e.g. I live on campus with a roommate who respects me):

Please list any other activities or programs you are involved in:

Has your opinion about college changed since you've attended this program? If so, please explain how:

Have you had prior experience with a mentoring or coaching program? If so, please explain:

Additional comments or suggestions for Rowan's Peer Mentoring Program:

Appendix B: Coach Survey

Please fill out this survey honestly and anonymously so that we may improve this program for future students. When completed, please return the survey to Mr. Woodruff or Amanda along with any completed surveys of students with which you have worked.

Thank you very much for your time, and we hope you had a great semester!

Please check which number best represents your degree of ability in each area using the following code: 1 = I have a lot of difficulty in this area 2 = I have some difficulty in this area 3 = I have acceptable skills in this area 4 = I excel in this area				
Ability Areas	1	2	3	4
General study skills				
Attention and concentration				
Studying for exams				
Use of time				
Memory				
Finishing work				
Academic skills				
Writing papers				
Summarizing articles				
Finding information				
Using math				
Participating in groups				
Participating in the classroom				
Nonacademic skills				
Understanding emotions in others				
Expressing my emotions				
Making friends				
Talking to other people				
Please check which number best describes the amount of coaching time spent on each area using this code: 1 = No time was spent on this activity 2 = A little bit of our time together was spent on this activity 3 = Much of our time together was spent on this activity 4 = Most of our time together was spent on this activity				
Time Spent on Activities	1	2	3	4
Study skills				
Working on learning strategies				
Reviewing class materials				

Writing papers				
Reading articles/books				
Organization				
Time management				
Discussion of future plans				
Discussion of personal matters				
Discussion of social issues				
<p>Please use the following code to rate the effectiveness of your coaching experience: 1 = Not true 2 = Somewhat true 3 = Very true</p>				
Coaching	1	2	3	
I had the skills to deal with my students' learning difficulties				
Our coaching sessions were effective				
I was knowledgeable in my students' content areas				
I had someone to go to if I needed guidance				
I asked about the learning needs of each of my students				
I feel that I provided as much time as necessary to each of my students				
I took the time to establish a good relationship with each of my students				
<p>Please use the following code to rate the importance of common experiences: 1 = Not important 2 = Somewhat important 3 = Very important</p>				
Common Experiences	1	2	3	
Sharing a common major				
Attending the same courses				
Coming from the same type of community				
Being of the same gender				
<p>Please use the following code to rate your satisfaction with each category: 1 = Not true 2 = Somewhat true 3 = Very true</p>				
Satisfaction	1	2	3	
My students and I developed good relationships				
I am satisfied with my coaching experiences				
I would participation in this program again				

Background Information:

Gender (circle one): Male Female

Race (circle one/optional): Asian/Pacific Islander African American Hispanic
Native American/Alaskan Native Caucasian (not of Hispanic
origin)

Year of study (circle one): Freshman Sophomore Junior Senior

Field of study (major/minor):

Please describe your living situation (e.g. I live on campus with a roommate who respects me):

Please list any other activities or programs you are involved in:

Has your opinion about college changed since you've attended this program? If so, please explain how:

Have you had prior experience with a mentoring or coaching program? If so, please explain:

Additional comments or suggestions for Rowan's Peer Mentoring Program:
